

## CLAIMS

What is claimed is:

1. A system, comprising:  
a plurality of loads;  
a plurality of power supplies coupled to a common power distribution system, the plurality of power supplies are adapted to provide power to said loads; and  
control logic coupled to said power supplies, said control logic determines whether output current from a power supply to a load is below a first threshold and, if so, causes one or more power supplies to be disabled.
2. The system of claim 1 wherein said control logic also determines whether output current from at least one of said power supplies exceeds a second threshold and, if so, causes a presently disabled power supply to be enabled.
3. The system of claim 1 wherein the control logic continues to disable power supplies until the output current from the power supplies then supplying power to a load is equal to or above said first threshold.
4. The system of claim 1 wherein said loads comprise computers.
5. A system, comprising:  
a plurality of servers;  
a plurality of power supplies adapted to provide power to said servers via a common distribution system; and  
a power supply communication module coupled to said power supplies, said power supply communication module monitors loads on said power supplies and disables a power supply if a load is below a first threshold.

6. The system of claim 5 wherein after disabling a power supply, the power supply communication module monitors the loads on the power supplies presently supplying power to the servers and disables another power supply if a load is still below the first threshold.
7. The system of claim 5 wherein the power supply communication module enables a presently disabled power supply if a load on a power supply exceeds a second threshold.
8. The system of claim 5 wherein the power supply communication module monitors loads by monitoring the output current of the power supplies.
9. The system of claim 5 wherein the power supply communication module couples to the power supplies via a communication bus and requests a power supply to provide a value indicative of its load via the communication bus.
10. A system, comprising:
  - a plurality of loads;
  - a plurality of power supplies adapted to provide power to said loads via a common distribution system; and
  - a means for determining whether output current from at least one of said power supplies to a load is below a first threshold and, if so, causing at least one of said power supplies to be disabled.
11. The system of claim 10 further including a means for determining whether output current from at least one of said power supplies exceeds a second threshold and, if so, causing a presently disabled power supply to be enabled.
12. The system of claim 10 further including a means for continuing to disable power supplies until the output current from the power supplies presently supplying power to a load is equal or greater than said first threshold.

13. Control logic adapted to dynamically control a plurality of power supplies, comprising:

a controller; and

memory coupled to said controller;

wherein said controller determines whether output current from at least one of said power supplies is below a first threshold and, if so, causing at least one of said power supplies to be disabled.

14. The control logic of claim 13 wherein said controller also determines whether output current from at least one of said power supplies exceeds a second threshold and, if so, causes a presently disabled power supply to be enabled.

15. The control logic of claim 13 wherein said controller continues to disable power supplies until the output current from the power supplies is equal or greater than said first threshold.

16. A method usable in a system including a plurality of power supplies which provide power to a plurality electrical devices, comprising:

monitoring the load on each of a plurality of power supplies;

comparing each of the loads to a first threshold;

disabling a power supply if a load is below said first threshold thereby causing the load on the remaining power supplies to increase.

17. The method of claim 16 wherein monitoring the load includes requesting the load to report its output current.

18. The method of claim 16 wherein disabling a power supply is repeated as long as a load on a power supply is below said first threshold.

19. The method of claim 16 further including enabling a power supply if a load is greater than a second threshold.

20. The method of claim 16 wherein enabling a power supply is repeated as long as a load on a power supply is above said second threshold.